

What is Claimed Is:

1. A multiple print stream management system comprising:
  - a document data processing system for generating a soft-copy of a document to be created and for generating a print file therefrom for each document portion of the document to be created;
  - 5 a printing stage including a plurality of printers each operable in accordance with a respective print file received from the document data processing system, each printer for printing the document portion in accord with the respective print file;
  - a finishing stage including one or more assembly devices for processing an output of each of the plurality of printers for collating the document portions into a final  
10 document corresponding to the document to be created; and
  - a processor for tracking each document portion and for directing collation thereof in accordance with intended attributes of the final document.
2. The multiple print stream management system according to claim 1 wherein the one or more assembly devices includes a print merge device for collating at least two document portions into a collated document in accordance with the attributes of the final document.
3. The multiple print stream management system according to claim 2, wherein the processor tracks and directs collation of the at least two document portions collated by the print merge device.
4. The multiple print stream management system according to claim 2, wherein the one or more assembly devices includes an auxiliary device downstream from the print merge device for applying an auxiliary item to the collated document in accordance with the attributes of the final document.

5        5.        The multiple print stream management system according to claim 1, further comprising one or more scanning devices positioned in the finishing stage for detecting an identifier on each document page or on a group of document pages of the document portions.

      6.        The multiple print stream management system according to claim 5, wherein the processor is configured to compare the detected identifier with the attributes of the final document for verifying collation of the document portions.

      7.        The multiple print stream management system according to claim 6, wherein in the event of an error in collation, the processor is configured to cause at least one printer of the printing stage to re-print at least one affected document portion of the document portions.

5        8.        The multiple print stream management system according to claim 6, wherein in the event of an error in collation, the processor is configured to cause each printer to print the document portion in accord with the respective print file.

      9.        A multiple print stream management system for managing production of a document to be created divided into document portions, comprising:

          a printing stage including a plurality of printers each for printing a respective document portion of the document to be created;

5        a finishing stage including one or more assembly devices for processing an output of each of the plurality of printers for collating the document portions into a final document corresponding to the document to be created; and

          a processor for tracking each document portion and for directing collation of the document portions in accordance with intended attributes of the final document specified  
10        in a data file for the document to be created.

      10.        The multiple print stream management system according to claim 9, further comprising one or more scanning devices positioned in the finishing stage for detecting an

identifier representing document attributes on each document page or on a group of document pages of the document portions.

11. The multiple print stream management system according to claim 10, wherein the processor is configured to compare the detected identifier with the attributes of the final document specified in the data file for verifying collation of the document portions.

12. The multiple print stream management system according to claim 11, wherein in the event of an error in collation, the processor is configured to cause at least one printer of the printing stage to re-print at least one affected document portion of the document portions.

13. The multiple print stream management system according to claim 11, wherein in the event of an error in collation, the processor is configured to cause each printer to print the document portion.

14. The multiple print stream management system according to claim 9, wherein the one or more assembly devices includes a print merge device for collating at least two document portions into a collated document.

15. The multiple print stream management system according to claim 14, further comprising a scanning device positioned corresponding to the print merge device for detecting an identifier on each document page or on a group of documents pages of the at least two document portions.

16. The multiple print stream management system according to claim 14, wherein the one or more assembly devices includes an auxiliary device for receiving the collated document and for applying an auxiliary item to the collated document.

17. The multiple print stream management system according to claim 16, further comprising a scanning device positioned corresponding to the auxiliary device for detecting an identifier on the auxiliary item.

18. The multiple print stream management system according to claim 9, further comprising a computer for producing a document file representing the document to be created.

19. The multiple print stream management system according to claim 18, wherein the computer creates a print file from the document file for each document portion, each printer receiving a respective print file for printing a respective document portion of the document to be created.

20. The multiple print stream management system according to claim 18, wherein the computer creates the data file containing final document attributes.

21. The multiple print stream management system according to claim 9, wherein the data file maintains attributes represented by the identifier selected from a group consisting of a document page, a printer of the plurality of printers to which the document page or the group of document pages is to be sent, a printer of the plurality of printers from which the document page or the group of document pages was processed, the order by which the document page or group of document pages is to be collated, a predetermined path through the printer stage which the document page or the group of document pages will progress, a predetermined path through the finishing stage which the document page or the group of document pages will progress, and any combination thereof.

22. A method for collating and tracking portions of a document to be created from multiple print resources, comprising the steps of:

generating multiple print files from a soft copy of the document to be created;

printing document portions from the multiple print files;

5           collating the document portions into a final document corresponding to the  
document to be created;  
          detecting an identifier on each document page or a group of document pages of the  
document to be created; and  
          verifying collation of the document portions in accordance with the detected  
10 identifier.

23.    A method for collating and tracking portions of a document to be created  
from multiple print resources, comprising the steps of:  
          compiling attributes of a final document corresponding to the document to be  
created;  
5        obtaining from multiple print resources portions of the document to be created;  
          collating the document portions into the final document;  
          detecting an identifier on each document page or a group of document pages of the  
document to be created;  
          comparing the detected identifier with the compiled final document attributes; and  
10        verifying collation of the document portions from the comparison.

24.    The method according to claim 23 wherein the collating step includes the  
step of collating at least two document portions of the document to be created into a  
collated document according to the final document attributes.

25.    The method according to claim 24, wherein the collating step includes  
applying an auxiliary item to the collated document to form the final document in  
accordance with the final document attributes.

26.    The method according to claim 23, wherein the step of compiling final  
document attributes includes creating a data file.

27.    The method according to claim 26, further comprising the step of  
populating data in the data file corresponding to the detected identifier.

28. The method according to claim 23, further comprising the step of identifying a primary document from the detected identifier.

29. The method according to claim 28, further comprising the step of accessing a data file according to the detected primary document identifier.

30. The method according to claim 23, further comprising determining the order of collation from final document attributes in accordance with the detected identifier.

31. The method according to claim 23, further comprising the step of determining whether any auxiliary item inserts should be applied to a collated document corresponding to the detected identifier.

32. The method according to claim 31, further comprising the step of detecting an identifier on the auxiliary item.

33. The method according to claim 32, further comprising verifying the auxiliary item insert corresponds to the collated document.

34. The method according to claim 23, wherein in the event of an error in collation, re-obtaining at least one affected document portion from at least one printer resource.

35. The method according to claim 23, wherein in the event of an error in collation, re-obtaining from the multiple print resources the portions of the document to be created.

36. A program product, comprising executable code transportable by at least one machine readable medium, wherein execution of the code by at least one programmable computer causes the at least one programmable computer to perform the sequence of steps, comprising:

5 receiving workflow data of document portions of a document to be created  
originating from multiple document streams;

comparing the workflow data with intended final document attributes of the  
document to be created; and

controlling collation of the document portions based on the comparison, to create a  
10 finished document in accord with the intended final document attributes.

37. The program product according to claim 36, wherein to enable correct  
collation of the document portions, automatically halting collation of the document  
portions when workflow data does not correspond to the final document attributes.

38. The program product according to claim 36, wherein in the event of an  
error, causing affected document portions to be re-printed.

39. The program product according to claim 36, wherein in the event of an  
error, causing all document portions to be re-printed.

40. The program product according to claim 36, further comprising storing the  
workflow data within the at least one programmable computer.

41. A computer control system for controlling collation of document portions  
originating from multiple document streams into a final document, comprising:

a computer for receiving data representing attributes of each document page or a  
group of document pages of each document portion, the computer for tracking the  
5 document portions originating from each document stream; and

a stored data file for maintaining attributes of the final document, the stored data  
file being accessible by the computer,

wherein the computer compares received data with final document attributes for  
controlling collation of the document portions and verifying collation thereof.

42. The computer control system according to claim 41, further comprising a  
scanning device in communication with the computer, the scanning device configured to

detect an identifier on each document page or the group of document pages and supply the detected identifier data to the computer.

43. The computer control system according to claim 41, wherein the computer stores data responsive to identifier detection in the data file.